EVALUATION MINE OF WATER TREATMENT IN THE SETTLING POND CASE STUDY

ACTIVITY AT THE UNDERGROUND IN THE PT NUSA HALMAHERA MINERALS, NORTH HALMAHERA, NORTH MOLLUCAS PROVINCES

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ABSTRACT

Study sites are in the scope of work PT Nusa Halmahera Minerals, which is administratively located in the village Tabobo, Malifut District, North Halmahera Regency, North Mollucas Province. Geographically to the underground mine Kencana is located at coordinates 355532,2581 mE-356338,7097 mE and 125080,6452 mN-125645,1613 mN and for the settling pond is located at 357241.9355 mE-357 879.0323 mE and 124354.8387 mN-124919.3548 mN. The purpose of this research is to know about the factors causing the mine water, to find out about the extent of mine water treatment activities undertaken and the extent of mine water treatment efficiency has been done, how effective the use of alum in water processing, so that from the results of these evaluations can be known clearly that the output from the settling pond of Gold, is the quality standard according to the Minister of Environment Decree No. 202 of 2004 or not.

Research carried out using field survey methods are the methods used to obtain data on the activities carried out by means of field observations, field measurements, and record things that are important and related to the results of research conducted, Laboratory analysis method is to analyze the data obtained during the survey, and data from laboratory results and methods of evaluation is to compare laboratory results with LH Quality Standard Ministerial Decree No. 202 of 2004. As for the alum dose determination made by the method of jartest.

Based on this research, it is known that the mine water is formed due to the rock types in the study area which is alkaline and is influenced by the shotcrete material containing cement. The results of sample testing on the parameters pH, TSS, and metals are in accordance with the standards of quality and efficiency of processing has been done ± 100%. From the results jartest, materials coagulant (alum) are required per day is 400 kg in 5000 liters of water. In addition, based on the results of the comparison between the results of laboratory analysis with the quality of the water quality standard was appropriate quality standards and are safe to dispose of the river.

Keywords: Evaluation, Treatment, Underground Gold Mine, Blasting, Mine Water, Settling Pond.